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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/812,311      | 03/30/2004  | Takao Takehara       | MINB-02023/A-3195   | 1795             |

7590 03/08/2006

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Washington, DC 20036

EXAMINER

JEAN PIERRE, PEGUY

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2819

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/812,311             | TAKEHARA, TAKAO     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Peguy JeanPierre       | 2819                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 1/12/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,5 and 8 is/are rejected.
- 7) ☐ Claim(s) 2-4,6,7 and 9-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement filed on 6/2/ 2005 has been considered. However, the IDS filed on 6/30/2005 is a duplicate of the IDS filed on 6/2/2005

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuseki (USP 5,188,348) in view of Cox, Jr. (USP 4,079,374).

Fuseki discloses in Figure 1 an encoder (5) that is coupled to a time/counter (6) to measure the period of the encoded signal, the counter further includes means to divide the frequency of the counter and output a divided encoded signal having a second period (see col. 2, lines 38-44). Fuseki does not disclose that the second period is related to a first period by a multiplication factor  $1/n$ , a resolver/digital converter, a DSP for processing the signals.

Cox discloses in Figure 4 a resolver that is configured to find an angle of a rotor axis (10) to output a sine wave and a cosine wave (see col. 5, lines 60-63). The system of Cox comprises a timer (27) coupled to a frequency divided signal (30) which divides the output of the timer by  $N$  (see Figure) to generate a resolver/encoder output signal (DATA OUTPUT), a processor (ROM) for processing the signals. The system of Cox is adapted

Art Unit: 2819

to track the phases of the resolver to minimize errors. Therefore, it would have been obvious to one having ordinary skill in the art to combine the teachings of Fuseki and Cox to provide an accurate resolver/encoder output signal having a predetermined period.

### ***Response to Arguments***

4. Applicant's arguments filed on 1/12/2006 have been fully considered but they are not persuasive. Applicant argues that "the claimed invention does not divide the frequency" Applicant also argues that "the claimed timer measures the period rather than counting the number of cycles." The Examiner disagrees. In paragraph 25 of the specification the DSP measures and determine the cycle or period of the encoded signals. The timer (same paragraph) synchronizes the encoded signals. It is to be noted that the timer is a component of the DSP. By broadly interpreting the claims, the DSP and the timer can interchangeably be used to measure and/or divide the period of the encoded signal. Consequently, the cited references can be read on the claimed language. The function of the DSP is not clearly recited in the claims. As for claim 8, the ROM can be considered as a DSP for its ability to store and process digital data to be retrieved later for subsequent processing.

### ***Conclusion***

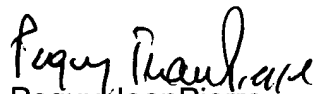
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2819

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peguy JeanPierre whose telephone number is (571) 272-1803/272-1803. The examiner fax phone number is (571) 273-1803.

  
Peguy JeanPierre  
Primary Examiner